

Revanth Krishna Senthilkumaran

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Pittsburgh, PA
Permanent Resident of the USA

EDUCATION

- **Carnegie Mellon University** Pittsburgh, PA
Master of Science in Robotics Aug 2025 – **May 2027**
- **Purdue University** West Lafayette, IN
Bachelor of Science in Computer Engineering Aug 2021 – Dec 2024

EXPERIENCE

- **AeroVironment** Moorpark, CA
Software Engineering Intern Summers 2024 and 2025
 - **Internship:** Integrated AV autonomous software stack with Vapor Helicopter UAS and PX4 Quadcopter, along with ATAK software. Wrote bridges to send surveillance and mapping missions with BehaviorTree XMLs.
- **IDEAS Laboratory** West Lafayette, IN
Undergraduate Research Assistant Sep 2023 - May 2025
 - **ARTEMIS:** Used a Unitree Go1 quadrupedal robot to demonstrate that robots can assist first-responders with AI-based triage labeling trained using a medical center ED dataset. Paper submitted to IEEE-IROS 2024.
- **Bechtel Innovation Design Center** West Lafayette, IN
Printing and Prototyping Peer Mentor Feb 2023 - Sep 2024
 - **Makerspace:** Working with over 800 students every semester for projects with Metal and Non-metal Laser Cutting, 3D Printing: SLA, SLS, Carbon-fiber reinforced Onyx and resin, along with many personal projects.
- **Robotics, Perception and Manipulation Laboratory** Minneapolis, MN
Undergraduate Research Assistant Summer 2023
 - **Spot:** Developed new method of robust data collection using Boston Dynamics robot quadruped Spot for learning from demonstration on manipulation tasks with language commands for a vision-language model (Per-Act). Project involved Python, ROS, Simulation, Camera Transformations, Voxels, Boston Dynamics API.
- **SMART Laboratory** West Lafayette, IN
Undergraduate Research Assistant Feb 2022 - Aug 2023
 - **IEEE-IROS 2023:** Established novel method of using UAVs to inspect surfaces autonomously with learning from expert demonstration **PUBLISHED** to IEEE-IROS 2023: **UPPLIED**. Used WeBots simulation environment, ROS, VICON camera system to perform real world experiments.
 - **IEEE-TAC 2023: MOCAS Dataset** - mobile robot SMARTmBOT used to create a multimodal dataset with user studies for simultaneous cognitive workload assessment **PUBLISHED** to IEEE-TAC 2023 journal.
- **Air Force Research Laboratory** West Lafayette, IN
Undergraduate Researcher Fall 2022 - Spring 2023
 - **NXP HoverGames3 Team Lead:** Led a team of students to compete in the NXP HoverGames3 UAV sustainability contest. Coordinated with the Horticulture department and proposed a method of using a drone with an RGB-depth camera to investigate and inspect lettuce plants grown on vertical farming, including shades of green, water content and gas sensing.
 - **IEEE Autonomous UAV Challenge 2023:** Worked with rover-tracking team to use a UAV to compete in a challenge, where a UAV tracks and follows a ground rover through obstacles.
- **The Autonomous Robotics Club of Purdue** West Lafayette, IN
President and Former Project Manager of Piano Hand Sep 2021 - May 2025
 - **President:** Representing largest robotics club of Purdue: duties incl. councils for funding pitches, networking, club collaborations, workshops and seminars. Leading America's largest student-run robotics expo, RISE.
 - **Piano Hand:** Founded team to build an autonomous human-like hand that can read sheet music and play the piano. Setup ROS simulation, electronics, micro-controllers, hardware and algorithms teams.

SKILLS

Languages: Python, C++, C, Assembly, Verilog, SQL **Technologies:** Git, ROS, Linux, Docker, MATLAB